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| APPLICATION NO. | FILING DATE | FIRST NAMED INVENTOR | ATTORNEY DOCKET NO. | CONFIRMATION NO. |
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| 10/076,433 | 02/19/2002 | Michiharu Yamamoto | 111996 | 2303 |

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| EXAMINER | |
|---|---|
| IP, SIKYIN | |

| ART UNIT | PAPER NUMBER |
|---|---|
| 1742 | |

DATE MAILED: 02/17/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

| Office Action Summary | Application No. 10/076,433 | Applicant(s) YAMAMOTO ET AL. | |
|---|---|---|---|
| | Examiner Sikyin Ip | Art Unit 1742 | |

*-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --*

**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

1)☒ Responsive to communication(s) filed on *02 February 2004*.

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

4)☒ Claim(s) *1-29* is/are pending in the application.

4a) Of the above claim(s) *2,5-9,11,13-15,17,19-21,23,25-27 and 29* is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1,3,4,10,12,16,18,22,24 and 28* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

**Application Papers**

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

12)☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☒ All b)☐ Some * c)☐ None of:

1.☒ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) Paper No(s)/Mail Date *6*.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____ .
5) ☐ Notice of Informal Patent Application (PTO-152)
6) ☐ Other: _____.

## DETAILED ACTION

*Election/Restriction*

1. Restriction to one of the following inventions is required under 35 U.S.C. 121:

   I. Claims 1, 3, 4, 10, 12, 16, 18, 22, 24, 28 are, drawn to a high strength titanium copper alloy, classified in class 148, subclass 432+.

   II. Claims 2, 5, 11, 13, 17, 19, 23, 25, and 29 are, drawn to a high strength titanium copper alloy, classified in class 148, subclass 432+.

   III. Claims 6, 8, 14, 20, and 26 are, drawn to a manufacturing method for a high strength titanium copper alloy, classified in class 148, subclass 682+.

   IV. Claims 7, 9, 15, 21, and 27 are, drawn to a manufacturing method for a high strength titanium copper alloy, classified in class 148, subclass 682+.

2. The inventions are distinct, each from the other because:

Inventions III-IV and I-II are related as process of making and product made. The inventions are distinct if either or both of the following can be shown: (1) that the process as claimed can be used to make other and materially different product or (2) that the product as claimed can be made by another and materially different process (MPEP § 806.05(f)). In the instant case that the process as claimed can be

used to make other and materially different product such as copper based alloy contains more than just Ti element.

3. Inventions (I and II) or (III and IV) are unrelated. Inventions are unrelated if it can be shown that they are not disclosed as capable of use together and they have different modes of operation, different functions, or different effects (MPEP § 806.04, MPEP § 808.01). In the instant case the different Groups of inventions have different modes of operation, function, and effects because of the transitional expression "consisting of" has separated the Groups.

4. Because these inventions are distinct for the reasons given above and have acquired a separate status in the art as shown by their different classification, restriction for examination purposes as indicated is proper.

5. Because these inventions are distinct for the reasons given above and have acquired a separate status in the art because of their recognized divergent subject matter, restriction for examination purposes as indicated is proper.

6. Because these inventions are distinct for the reasons given above and the search required for Group I is not required for Groups II, III, or IV and vise versa, restriction for examination purposes as indicated is proper.

7. During a telephone conversation with Ms. Melanie Mealy (Reg #40085) on February 2, 2004 a provisional election was made with traverse to prosecute the

invention of Group I, claims 1, 3, 4, 10, 12, 16, 18, 22, 24, and 28. Affirmation of this election must be made by applicant in replying to this Office action. Claims as set forth in Groups II-IV above are withdrawn from further consideration by the examiner, 37 CFR 1.142(b), as being drawn to a non-elected invention.

*Double Patenting*

8. The nonstatutory double patenting rejection is based on a judicially created doctrine grounded in public policy (a policy reflected in the statute) so as to prevent the unjustified or improper timewise extension of the "right to exclude" granted by a patent and to prevent possible harassment by multiple assignees. See *In re Goodman*, 11 F.3d 1046, 29 USPQ2d 2010 (Fed. Cir. 1993); *In re Longi*, 759 F.2d 887, 225 USPQ 645 (Fed. Cir. 1985); *In re Van Ornum*, 686 F.2d 937, 214 USPQ 761 (CCPA 1982); *In re Vogel*, 422 F.2d 438, 164 USPQ 619 (CCPA 1970);and, *In re Thorington*, 418 F.2d 528, 163 USPQ 644 (CCPA 1969).

A timely filed terminal disclaimer in compliance with 37 CFR 1.321© may be used to overcome an actual or provisional rejection based on a nonstatutory double patenting ground provided the conflicting application or patent is shown to be commonly owned with this application. See 37 CFR 1.130(b).

Effective January 1, 1994, a registered attorney or agent of record may sign a terminal disclaimer. A terminal disclaimer signed by the assignee must fully comply with 37 CFR 3.73(b).

9. Claims 1, 3, 4, 10, 12, 16, 18, 22, 24, and 28 are provisionally rejected under the judicially created doctrine of obviousness-type double patenting as being unpatentable over claims 1-13 of copending Application No. 09/984,039 (U.S. Pub No.: US 2002/0090315). Although the conflicting claims are not identical, they are not patentably distinct from each other because the claimed Ti-Cu alloy composition,

grain size, and tensile properties are overlapped by claims of said copending application.

This is a provisional obviousness-type double patenting rejection because the conflicting claims have not in fact been patented.

*Claim Rejections - 35 USC § 103*

10. The factual inquiries set forth in *Graham* v. *John Deere Co.*, 383 U.S. 1, 148 USPQ 459 (1966), that are applied for establishing a background for determining obviousness under 35 U.S.C. 103(a) are summarized as follows:

1. Determining the scope and contents of the prior art.
2. Ascertaining the differences between the prior art and the claims at issue.
3. Resolving the level of ordinary skill in the pertinent art.
4. Considering objective evidence present in the application indicating obviousness or nonobviousness.

11. This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c ) and potential 35 U.S.C. 102(f) or (g) prior art under 35 U.S.C. 103(a).

12. Claims 1, 3, 4, 10, 12, and 16 are rejected under 35 U.S.C. 102(b) as anticipated by or, in the alternative, under 35 U.S.C. 103(a) as obvious over USP 4599119 to Ikushima et al.

13. Ikushima disclose(s) the features including the claimed Ti-Cu alloy (col. 1, lines 35-58), grain size (col. 1, lines 60-63), hardness, tensile properties, and bending properties (Table 4, first 4 samples). When prior art compounds essentially "bracketing" the claimed compounds in structural similarity are all known, one of ordinary skill in the art would clearly be motivated to make those claimed compounds in searching for new products in the expectation that compounds similar in structure will have similar properties. In re Gyurik, 596 F.2d 1012, 1018, 201 USPQ 552, 557 (CCPA 1979); See In re May, 574 F.2d 1082, 1094, 197 USPQ 601, 611 (CCPA 1978) and In re Hoch, 57 CCPA 1292, 1296, 428 F.2d 1341, 1344, 166 USPQ 406, 409 (1970). Therefore, it would have been obvious to one of ordinary skill in the art to select any portion of range, including the claimed range, from the broader range disclosed in a prior art reference because the prior art reference finds that the prior art composition in the entire disclosed range has a suitable utility. Also see MPEP § 2131.03 and § 2123.

14. Claims 18 and 24 are rejected under 35 U.S.C. 103(a) as being unpatentable over USP 4599119 to Ikushima et al as applied to claims above and in view of Van Vlack.

15. The claimed subject matter as is disclosed and rejected above by the cited reference(s) except for the claimed tensile strength and hardness. However, Van

Vlack in pages 187 and 189, Figures 6-5.1 and 6-6.2, (a)-(c), respectively, discloses cold work increases tensile strength and hardness and decreases elongation of Cu alloys in the same field of endeavor or the analogous metallurgical art. Therefore, it would have been obvious to one having ordinary skill in the art of the cited references at the time the invention was made to compromise ductility/elongation for higher tensile properties and hardness in order to improve spring/elastic property. It has been well settled that selecting a range in a known range by optimization for the best results is within ambit of ordinary skill artisan, see In re Aller, et al., 105 USPQ 233 and *In re Boesch*, 617 F.2d 272, 276, 205 USPQ 215, 219 (CCPA 1980). Moreover, optimization of a variable recognized in the art as a result-effective variable normally is considered to be within the ordinary skill of the art. See In re Antonie, 559 F.2d 618, 195 USPQ 6 (CCPA 1977).

16. Claims 22 and 28 are rejected under 35 U.S.C. 103(a) as being unpatentable over USP 4599119 to Ikushima et al in view of Van Vlack as applied to claims 18 and 24 above, and further in view of USP 6585833 to Ordillas.

17. The claimed subject matter as is disclosed and rejected above by the cited reference(s) except for the fork shape connector. However, Ordillas in Figures 1 and 2 and col. 1, line 10 to col. 2, line 8 discloses the conventional fork shaped connectors are known to be made with Cu based alloy in the same field of endeavor

or the analogous metallurgical art. Therefore, it is contemplated within ambit of ordinary skill artisan to use Cu based alloys to form conventional fork shape connector because of the spring property of Cu based alloy.

*Conclusion*

Applicant is reminded that when amendment and/or revision is required, applicant should therefore specifically point out the support for any amendments made to the disclosure. See 37 C.F.R. § 1.121.

*Examiner Correspondence*

Any inquiry concerning this communication or earlier communications from the examiner should be directed to S. Ip whose telephone number is (571) 272-1241. The examiner can normally be reached on Monday to Friday from 5:30 A.M. to 2:00 P.M.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Dr. Roy V. King, can be reached on (571)-272-1244.

The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

SIKYIN IP
PRIMARY EXAMINER
ART UNIT 1742

S. Ip
February 9, 2004